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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,625	04/10/2001	Sonja Eijsbouts	ACH2779US	7654

7590 05/14/2003  
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EXAMINER

NGUYEN, CAM N

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 05/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/829,625

Applicant(s)  
Eijsbouts

Examiner  
Cam Nguyen

Art Unit  
1754



-- The MAILING DATE of this communication appears in the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Apr 10, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above, claim(s) 32 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 15-18, 20-24, 26, 30, and 31 is/are rejected.
- 7) ☒ Claim(s) 5-14, 19, 25, and 27-29 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4 6) ☐ Other:

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### **DETAILED ACTION**

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-31, drawn to a process of activating a catalyst composition, classified in class 502, subclass 22+.
  - II. Claims 32-33, drawn to a process of hydrotreating hydrocarbon feeds using the catalyst obtained by the process of Group I, classified in class 208, subclass 216 R+.

The inventions are distinct, each from the other because:

2. Inventions I and II are unrelated (distinct). Inventions are unrelated (distinct) if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions produce different products, that is the product obtained by the process of Group I is a catalyst; whereas, the product obtained by the process of Group II is a hydrocarbon.
3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, and have acquired a separate status in the art as shown by their different classification, and because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

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4. During a telephone conversation with *Mr. Louis Morris* on *September 9, 2002*, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-31. Affirmation of this election must be made by applicant in replying to this Office action. Claims 32-33 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

#### ***Claim Objections***

6. Claim 24 is objected to because of the following informalities:

In line 1-2, the claim should be rewritten as follows:

--The process of claim 1 wherein the Group VI metals are Mo and W, and the Group VIII metals are Co and Ni--.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112 (Second Paragraph)***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 4, 22, & 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Regarding claim 4, the proper Markush terminology is --wherein the organic liquid is selected from the group consisting of white oil, gasoline, diesel, gas oil, and mineral lube oil--.  
See MPEP § 2173.05(h).

B. Claim 22 recites the limitation "the Group VIB metal" in line 1. There is insufficient antecedent basis for this limitation in the claim.

C. Claim 30 recites the limitation "the *ex situ* hydrogen treatment" in line 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102(b)***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-4, 15-18, 20, 24, 26, & 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Seamans et al., "hereinafter Seamans", (PCT WO 94/25157).

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Seamans discloses a process of activating a catalyst by heating the catalyst in the presence of hydrogen and at least one hydrocarbon feedstock (which is the claimed organic liquid) having a boiling point of at least 35°C, preferably from 40°C, more preferably from 85°C, to 700°C, preferably to 500°C at atmospheric pressure (see page 17, ln 33-page 18, ln 4). Suitable hydrocarbon feedstocks including diesel fuels, gasolines, gas oils, residual oils, etc. (see page 18, ln 4-7). The catalyst is activated at a temperature from 25°C to 500°C, preferably to 450°C (see page 18, ln 7-9). The catalyst to be activated is a supported metal catalyst containing elemental sulfur, particularly a Group VIB and/or Group VIII metal catalyst (see page 16, ln 15-17). The sulfur compound incorporated into the catalyst (which is the claimed S-containing organic additive) is an organic compound comprising a mercapto-group (see page 8, ln 15-28).

Regarding claims 1 & 15, the claimed activation temperature is met by the teaching of the reference since the disclosed temperature range falls within the claimed temperature range (see Seamans at page 18, ln 7-9).

Regarding claim 2, it is considered the limitation on "contacting the catalyst with the organic liquid prior to contacting with hydrogen" is met in view of the disclosed contacting temperature, which is at room temperature. That is, at room temperature, either the organic liquid or the hydrogen can be contacted with the catalyst first without destroying the process or changing the catalytic result of the product.

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Regarding claim 3, the claimed organic liquid boiling point range is met by the teaching of the reference since the disclosed boiling point range falls within the claimed boiling point range (see Seamans at page 17, ln 33-page 18, ln 4).

Regarding claims 16-18, the claims are met by the reference because Seamans teaches the claimed S-containing organic additive (see Seamans at page 8, ln 15-28).

Regarding claim 20, the claim is met by the reference because Seamans teaches the sulfur compound is incorporated into the catalyst subsequent to the incorporation of the hydrogenation metal components (see page 7, ln 13-18).

Regarding claim 24, the claim is met by the reference because Seamans teaches the catalyst contains Group VI metals and/or Group VIII metals, which include the claimed metal components (see Seamans at page 16, ln 15-17).

Regarding claim 26, in view of the teaching in the reference (see Seamans at page 17, ln 32-33), that the presulfided catalyst is loaded into a reactor for activation treatment, thus the activation step is carried out *ex situ*.

Regarding claim 31, Seamans teaches the claimed catalyst, thus anticipates the claim.

Seamans discloses the claimed process of activating a catalyst, thus anticipates the claims.

11. Claims 1-4, 15-18, 20-24, 26, & 31 are rejected under 35 U.S.C. 102(b) as being anticipated by de Jong et al., "hereinafter de Jong", (US Pat. 5,139,990).

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De Jong discloses a process of preparing a catalyst comprising: (a) obtaining a catalyst comprising a carrier material having deposited thereon one or more metals or metal compounds catalytically active for the hydrotreatment of hydrocarbon-containing feeds; (b) contacting the catalyst of step (a) with an aqueous medium containing an organic sulfur compound to incorporate an effective amount of the organic sulfur compound into the catalyst; the organic sulfur compound is selected from a group including the mercapto-group; (c) drying the sulfur-containing catalyst of step (b); and (d) activating the dried sulfur-containing catalyst of step (c) by contacting said catalyst with hydrogen gas at a temperature of from 100°C to 600°C. (see col. 8, claim 1). De Jong further discloses the activation is carried out by passing hydrocarbon gas, in combination or not with a hydrocarbon feed, over the presulfided catalyst at a temperature in the range of 100°C to 600°C, preferably in the range of 100°C to 400°C, and the activation is carried out either *ex situ* or *in situ* (see col. 4, ln 46-56). The catalyst contains a carrier with deposited thereon one or more metals or compounds of metals, such as oxides, the metals is selected from a group including Group VIB and Group VIII of the Periodic Table (see col. 3, ln 41-46). The metal content of the catalyst generally is 0.1-30% by weight, calculated on the weight of the total catalyst (see col. 3, ln 51-53).

De Jong discloses the claimed process of activating a catalyst, thus anticipates the claims.



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*Allowable Subject Matter*

12. Claims 5-14, 19, 25, & 27-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As concern with claims 5-9, the prior art does not disclose or fairly suggest a process of activating a catalyst composition requiring the organic liquid which comprises the claimed oxygen contents.

As concern with claims 10-11, the prior art does not disclose or fairly suggest a process of activating a catalyst composition requiring the organic liquid which comprises the claimed iodine numbers.

As concern with claims 12-13, the prior art does not disclose or fairly suggest a process of activating a catalyst composition requiring the organic liquid which comprises the claimed sulfur contents.

As concern with claim 14, the prior art does not disclose or fairly suggest a process of activating a catalyst composition requiring the claimed organic liquid amount.

As concern with claim 19, the prior art does not disclose or fairly suggest a process of activating a catalyst composition requiring the claimed S-containing organic additive and hydrogenation metals molar ratios.

As concern with claims 25 & 27-29, the prior art does not disclose or fairly suggest a process of activating a catalyst composition requiring the claimed sulfur amounts.

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There is no motivation to combine the teachings of the references together.

13. Claim 30 contains allowable subject matter and would be allowed when the rejection under 112 (second paragraph) is overcome. The following is the reason for allowance of the claimed subject matter.

The prior art does not disclose or fairly suggest a process of activating a catalyst composition requiring passivating the catalyst after the *ex situ* hydrogen treatment.

#### ***Citations***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schoonhoven et al. (US Pat. 5,017,535), Epperly et al. (US Pat. 5,215,652), Eijsbouts et al. (US Pat. 6,540,908 B1), Ramirez de Agudelo et al. (US Pat. 5,948,942), Arretz (US Pat. 6,288,006 B1), & Berrebi (US Pat. 5,169,819) are cited for related art.

#### ***Conclusion***

15. Claims 1-33 are pending. Claims 1-4, 15-18, 20-24, 26, & 30-31 are rejected. Claims 5-14, 19, 25, & 27-29 are objected. No claims are allowed.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Cam Nguyen, whose telephone number is (703) 305-3923. The


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examiner can normally be reached on M-F from 8:30 am. to 6:00 pm, with alternative Monday off.

The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 (before finals) and (703) 872-9311 (after-final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Nguyen/cnn *cnn*  
May 8, 2003

  
Cam Nguyen  
Patent Examiner